HTS Lead Procurement Plan

S. Feher

Overview

- The procurement plan was outlined few month ago:
  - Vendor visit to accumulate knowledge about
    - Vendor's willingness to produce leads for BTeV
    - Vendor's capability of procuring HTS leads

    Deadline => end of June 2004
  - Make a decision on which direction to proceed

    1. Procure leads from vendors which have been demonstrated that they can built leads for Fermilab – AMSC, IGC (maybe AMI)
    2. Build our own leads based on CERN design

    Deadline => end of July 2004
  - If 1. is chosen issue a Request for Interest (RFI) to potential vendors
    - Power Lead Specifications (PLS) – might be somewhat looser but it should be clear in terms of overall envelope => Spool design should be able to proceed and no later adjustment to this envelope allowed
    - Outline the procurement plan – make sure the vendor is a ware of the time table they have to work with (like the 9 month evaluation period)

    Deadline => the end of August 2004

Overview

- Issue a Request for Proposal
  - For those vendors which replied to RFI
  - More detailed PLS => make sure to meet all of our expectations including personnel information, options purchasing the spares etc.
  - Define the date we should receive the vendor's reply

  Deadline => end of December 2004
- Award the winning company by issuing the purchase order
  - Date clearly when we should receive the first pair of leads and that the rest of the production is on hold until based on the test results we approve the production of the rest of the leads
  - Make sure the options are clearly stated
  - End date of the lead delivery is October 2006

  Deadline => October 2005

Vendors visit

- AMI
  - Has been reported by T. Peterson who visited vendor site
    - They are willing to make leads
    - In principle they are capable of making leads
    - They lost their partner AMSC to produce the lower section
- AMSC – HTS-110
  - So far only phone conversation by S. Feher
    - From the very beginning they are interested to make more leads
    - Their lead department was sold out to HTS-110 (New Zealand)
    - HTS-110 are very interested to make **more** leads for Fermilab
    - This new company is under formation/re-organization => hard to judge their capability => close to the end of Summer they might be ready to talk to us
    - Full support from AMSC but only through HTS-110
      - Help to re-design (if minor) the lead for higher current operations

Vendors visit

- IGC Super Power
  - Has been visited by T. Peterson and S. Feher
    - They showed great interest to deliver leads for Fermilab
    - Their lead Power Lead Engineer (D. Hazelton) is still on the project and he is enthusiastic to work on it => aware of the relevant details and modifications we requested if we purchase from them the production leads
    - Upper management has been informed and gave full support to Drew
    - Scale up (from 6kA to 9.5 kA) should be not an issue – 30A tape => 100A tape
    - They have to purchase the Bi-2223 tape from outside vendor (AMSC, Brooker or Sumitomo – good relationship)
    - Removable leads without taking the Spool box apart => slightly higher contact resistance but they can re-design it to meet our expectations
    - Hi-Tech highly instrumented company => products we have been seen are looking professional; good reputation in MRI

Vendors visit

- CERN
  - Has been visited by S. Feher
    - They showed great interest to help to procure leads for Fermilab
    - Their lead Power Lead Engineer (A. Ballarino) is enthusiastic to work on it => she has the full details of the design and fabrication procedure
    - We can easily optimize the lead for Fermilab as long as the lead has the same length; 1.4 m (it might not be a problem – J. Brandt)
    - Upper management has been informed and they are supportive – they see no conflict with tape fabrication
    - Scale down (from 13kA to 9.5 kA) should be not an issue – probably about the same amount of tape
    - They are purchasing the Bi-2223 tape from outside vendor (AMSC and Brooker)

Strategy

- Direction => procure leads from qualified vendors; CERN lead design will be put aside
  - There are three vendors who are interested in procuring leads
  - At least one of them (IGC) is fully capable of procuring leads
  - HTS-110 has a great potential – full support from AMSC
- Make a decision how many vendors to include
- Focus on RFI
  - PLS => including overall envelope (dimensions, joints, cooling scheme)
    - HTS-110 can make only minor modifications
      - Same dimension
      - More HTS tape and copper
    - IGC need probably more room for their new design to optimize the lower end joint

Strategy

- Preferred cooling would be => internal LN2 line but
  - HTS-110 needs major redesign => no in-house support; AMSC might not be able to provide major modifications
  - IGC will lose the feature of retract ability

✍ Budgetary pricing information
- Describe how many leads we are planning to purchase
- Ask them how long price validity they can provide; describe when can we make a purchase order

✍ After responses to the RFI is collected and before the RFP is issued

✍ Visit HTS-110 to evaluate their capability

✍ Determine when to issue the RFP (it is advised to issue it when the money is in "our" hand)

✍ Determine whom to issue the RFP (sole source to IGC is an option)
- Capability/ riskiness – experts, equipment etc
- Price
- Deadline

Strategy

- June July 2005 is the “deadline” for finalizing the details (most likely the final dimension) of the Power leads
  - This means we have to make our final vendor (design) selection in June
  - Based on the price validity interval the vendors provide we should issue the RFP
  - Price wise the best would be if we can allocate the money when we issue the FRP
- Mean time we will continue testing ASC power leads